

## **ABSTRACT**

5        The present invention discloses methods of making improved rubber modified asphalt cement compositions, and compositions made by the method, where the compositions are useful in paving, roofing, coating and other sealing applications. In one aspect, the method comprises combining asphalt, RVPR (or a blended mixture of asphalt and RVPR) and at least one dodecyl or tridecylbenzene sulfonic acid (SA),  
10 which can be linear (LAS) or branched (BAS), in the presence of moderate heat. After heating the resultant RMAC mixture exhibits at least one of the following: (1) an increase in softening point, (2) an increase in hardness, or (3) improved recovery from deformation. In another aspect, the invention teaches addition of at least one SA to previously manufactured RMAC to accomplish at least one of the following: (1) an  
15 increase in softening point, (2) an increase in hardness, or (3) improved recovery from deformation. For paving compositions, the resultant RMAC mixtures made by the methods of the invention are mixed with an appropriate grade of aggregate composition, and other paving materials as desired.